

LISTING OF CLAIMS

This listing of claims will replace all prior versions of claims in the application:

1. (previously presented) A method of producing a modified glutenin or seed-storage protein, the method comprising adding to a glutenin or seed-storage protein an exogenous amino acid sequence from a protein other than said glutenin or seed-storage protein which confers to the modified protein the ability to bind a ligand, wherein the modified protein has an ability to incorporate into gluten.
2. (previously presented) The method of claim 1 wherein the exogenous amino acid sequence includes one or more cysteine residues.
3. (previously presented) The method of claim 2 wherein one or more cysteine residues are incorporated at one or both ends of the amino acid sequence of the protein.
4. (previously presented) The method of claim 1 wherein the modified protein further comprises one or more exogenous amino acid residues which confer to the protein an enhanced ability to incorporate into gluten when compared to said glutenin or seed-storage protein.
5. (previously presented) The method of claim 1 wherein the exogenous amino acid sequence binds lipid or starch.
6. (previously presented) The method of claim 5 wherein the exogenous amino acid sequence that binds lipid is derived from barley oleosin protein or wheat CM16 protein.
7. (previously presented) The method of claim 5 wherein the exogenous amino acid sequence that binds starch is derived from glucoamylase from *Aspergillus niger*.
8. (previously presented) The method of claim 1 wherein the glutenin or seed-storage protein is a low molecular weight glutenin, high molecular weight glutenin, gliadin, puroindoline, grain softness protein, friabilin, or Chloroform/Methanol-soluble protein.
9. (previously presented) The method of claim 8 wherein the glutenin or seed-storage protein is C hordein from barley.

10. (previously presented) A modified glutenin or seed-storage protein having an ability to incorporate into gluten, comprising an exogenous amino acid sequence which confers to the modified protein the ability to bind a ligand said modified protein being produced by the method of claim 1.

11. (previously presented) A modified glutenin or seed-storage protein having an ability to incorporate into gluten, comprising an exogenous amino acid sequence from a protein other than a corresponding unmodified glutenin or seed-storage protein which confers to the modified protein the ability to bind a ligand.

12. (previously presented) The modified glutenin or seed-storage protein of claim 11 wherein the exogenous amino acid sequence binds lipid or starch.

13. (previously presented) The modified glutenin or seed-storage protein of claim 12 wherein the exogenous amino acid sequence that binds lipid is derived from barley oleosin protein or wheat CM16 protein.

14. (previously presented) The modified glutenin or seed-storage protein of claim 12 wherein the exogenous amino acid sequence that binds starch is derived from glucoamylase from *Aspergillus niger*.

15. (previously presented) The modified glutenin or seed-storage protein of claim 11 wherein the unmodified glutenin or seed-storage protein is a low molecular weight glutenin, high molecular weight glutenin, gliadin, puroindoline, grain softness protein, friabilin, or Chloroform/Methanol-soluble protein.

16. (currently amended) A modified glutenin or seed-storage protein selected from the group consisting of ANG/SBD/Cys7Cys 236, ANG/OHBD/Cys7Cys236, and ANG/CM16/Cys7Cys126, as hereinbefore defined.

17 – 27. (canceled)